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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/014,497	12/14/2001	Ashraf S. Hasan Mahmoud	08893269US	9993

7590 05/01/2006

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EXAMINER

JONES, PRENELL P

ART UNIT	PAPER NUMBER
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2616

DATE MAILED: 05/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/014,497	Applicant(s) HASAN MAHMOUD ET AL.	
	Examiner Prenell P. Jones	Art Unit 2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED. (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 March 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-6,9-12, 14-19 and 21-26 is/are pending in the application.
- 4a) Of the above claim(s) 21-26 is/are withdrawn from consideration.
- 5) ☐ Claim(s) 1,3-5 and 14-19 is/are allowed.
- 6) ☐ Claim(s) 6,9 and 10 is/are rejected.
- 7) ☐ Claim(s) 11 and 12 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Response to Election/Restrictions

1. Applicant's election with traverse of Group I (Claims 1, 3-6, 9-12 and 14-19) in the reply filed on April 7, 2006 is acknowledged. The traversal is on the ground(s) that that both Group I (Claims 1, 3-6, 9-12, 14-19) drawn to determining the cost for blocking rates claims, and Group II (Claims 21-26) drawn to borrowing power in an emergency burst are both directed towards a single inventive concept of radio resource management.

This is not found persuasive because; Although, the Applicant is determining network cost for current blocking rates and borrowing power in an emergency transmission situation as they both are associated with radio resource management, the limitation of borrowing power in an emergency transmission situation is not required for the implementation of determining the network cost for blocking rates based on target blocking rates and adjusting traffic. Whereas, in the same respect, "determining if emergency power can be borrowed in an emergency transmission situation," is not required to perform the act of determining network cost for current network blocking rates based on defined target blocking rates. Therefore, it is presented that the Applicant is claiming two separate inventions.

The requirement is still deemed proper and is therefore made FINAL.

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1, 3-6, 9-12, 14-19, drawn to determining the cost for blocking rates as associated with minimum power requirement and maximum transmission rate, classified in class 370, subclass 237, 252, 338, 395, 477.

II. Claims 21-26, drawn to a communication system wherein radio resource management includes borrowing power in an emergency burst transmission situation, classified in class 455, subclass 404, 414, 452.

2. The inventions are distinct, each from the other because of the following reasons:

Group I claims calculating network blocking rates with respect to associated characteristics, whereas Group II claims borrowing power in an emergency transmission situation. Although, the Applicant is utilizing calculation/optimization of network blocking rates with respect to associated characteristics and borrowing power in an emergency transmission situation as it is associated with radio resource management, the limitation of borrowing power in an emergency transmission situation is not required for the implementation of determining the network cost for blocking rates based on target blocking rates and adjusting traffic. Whereas, in the same respect, "determining if emergency power can be borrowed in an emergency transmission situation," is not required to perform the act of determining network cost for current network blocking rates based on defined target blocking rates.

Because these inventions are distinct for the reasons given above and the search required for Group I is not required for Group II, restriction for examination purposes as indicated is proper.

Response to Arguments

1. Applicant's arguments filed on December 13, 2005 with respect to claims 1, 3-6, 9-12 and 14-19 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Noubir (IEEE non-patent literature) in view of Tiedemm et al (US PG PUB 20020012332).

Regarding claim 6, Noubir discloses radio resource management by utilizing adjusting partitioning of resources discloses radio resource arrangement (Abstract, Fig. 1, Introduction, resources/slots are partitioned in accordance with request burst, and resource management algorithms utilize power control, page 2484, right column and page 2485, right column). However, Noubir is silent on utilizing maximum transmission rate and minimum power. In a wireless communication system that utilizes managing through scheduling usage of transmission data rates and power, Tiedemann discloses assigning transmission rates to users

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and utilizing high speed data transmission in conjunction with minimum transmit power (Abstract, Figs. 5-8, paragraph 0055 thru 0057). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to be motivated to implement utilizing maximum transmission rate and minimum power as taught by Tiedemann with the teachings of Noubir for the purpose of further managing the use of resources in radio environment as to minimize congestion and increase throughput.

4. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Noubir (IEEE non-patent literature) in view of Tiedemann et al (US PG PUB 20020012332) as applied to claim 6 above, and further in view of Tiedemann et al (US PG PUB 20050193140).

Regarding claim 9, as indicated above, Noubir discloses radio resource management by utilizing adjusting partitioning of resources discloses radio resource arrangement and Tiedemann (US PG PUB 20020012332) discloses assigning transmission rates to users and utilizing high speed data transmission in conjunction with minimum transmit power. Noubir is silent on comparative decisions among current contending users. But, Tiedemann (US PG PUB 20020012332) further discloses that in a CDMA system, users communicate with one another in acquiring resources (paragraph 0009 & 00010). In addition, in analogous art, Tiedemann (US 20050193140) discloses a multiple access system wherein a plurality of users acquire resources (transmission rate) whereby allocation of resources is processed with use of monitoring system with respect to users and other sources of interference as a function of loading/loading conditions (Abstract, paragraphs 0023, 0027, 0034, 0035, users/remote units abide by multiple criteria and methods for acquiring transmission rates/data burst based one of which is based on a level urgency.) Therefore, it would have been obvious to one of ordinary

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skill in the art at the time of the invention to be motivated to implement multiple users communicating between one another via comparative decisions as taught by Tiedemann (US 20050193140) with the combined teachings of Noubir and Tiedemann (US PG PUB 20020012332) for the purpose managing the use of resources in radio environment as to minimize congestion and increase throughput.

5. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Noubir (IEEE non-patent literature) in view of Tiedemm et al (US PG PUB 20020012332) as applied to claim 6 above, and further in view of Khaleghi et al (US PAT 6,975,609).

Regarding claim 10, as indicated above, Noubir discloses radio resource management by utilizing adjusting partitioning of resources discloses radio resource arrangement and Tiedemann discloses assigning transmission rates to users and utilizing high speed data transmission in conjunction with minimum transmit power. However, Noubir and Tiedemann are silent on storing burst request in queues based on priority. In a wireless communication system wherein resources are allocated, Khaleghi discloses a scheduler manages burst request that are stored in queues, whereby the burst request in the queues are a function of time of arrival/priority (col. 9, line 35-65, col. 11, line 8-50). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to be motivated to implement utilizing storing burst request in association with priority as taught by Khaleghi with the combined teachings of Noubir and Tiedemann for the purpose of further managing the use of resources in radio environment and as to minimize congestion and increase throughput.

Allowable Subject Matter

1. Claims 1, 3-5 and 14-19 are allowed over prior art.

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2. Claim 11 and 12 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

3. The following is a statement of reasons for the indication of allowable subject matter: Applicant has canceled previously objected claims 2 and previously rejected claims 7-8, 13 and 20. Applicant has amended claims 11 and 14-19 to correct the previous 112, second paragraph rejection.

Although the combined prior art of Noubir who discloses implementation of radio resource management by utilizing adjusting partitioning of resources, and Home et al who discloses resource allocation based on priority levels wherein blocking rates are utilized, and Tiedemann et al discloses assigning transmission rates to users and utilizing high speed data transmission in conjunction with minimum transmit power, Khaleghi et al discloses a scheduler manages burst request that are stored in queues, whereby the burst request in the queues are a function of time of arrival/priority, Guo who discloses transmission rate change in communication networks, and Aboul-Magd et al discloses implementation of radio resource management by utilizing adjusting partitioning of resources, they fail to teach or suggest with respect to claim 1, determining the network cost for the current blocking rates periodically based on predetermined target blocking rate, with respect to claim 11, assigning a highest priority to the data burst requests serviceable at a maximum rate with a minimum power requirement, with respect to claim 12, equalizing a rate of transmitted information by adaptively allocating the user a second burst duration with a corresponding second burst rate, the second burst rate being lower than the maximum burst rate, so that the product of the second burst rate and burst duration is equal to the product of them maximum burst rate and the corresponding minimum burst, with respect to claim 14, granting a highest possible burst rate for transmission from the

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pool of burst rates without adding significantly to the interference level, with respect to claim 18, calculating a required time for the transmission of the data burst using the lowest rate, whereby the required time is below an allowed maximum burst duration.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Prenell P. Jones whose telephone number is 571-272-3180. The examiner can normally be reached on 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on 571-272-3179. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Prenell P. Jones

April 26, 2006



CHI PHAM
SUPERVISORY PATENT EXAMINER
ELECTRONIC BUSINESS CENTER

4/28/06